IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Hesheng Zhang	Atty Docket No. TJCZ-00101-NUS
US Serial No.: 10/595,609	Art Unit: 1625
Filing Date: 04/30/2006	Examiner: CHANG, CELIA C
Confirmation No. 3461	Paper Type: Declaration under 37 CFR 1.131
For: Novel process for preparing donepezil and its derivatives	In response to: Office Action Mailed 09/16/2011

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By EFS-Web Only

DECLARATION UNDER 37 C.F.R. 1.131

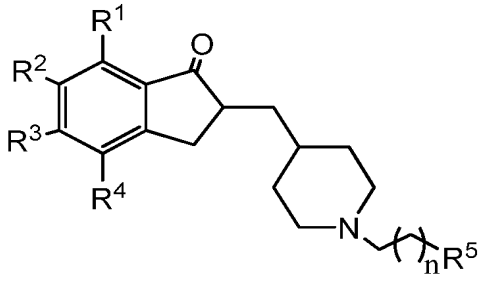
(Establishing Completion of Invention in a WTO Country after January 1, 1996)

SIR:

I, Hesheng Zhang, hereby do declare and state as follows:

1. I am the sole inventor of all claims of the above-identified application.

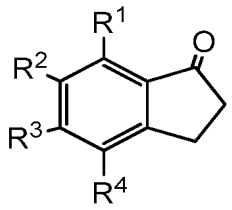
2. Before March 22, 2004, I completed and actually reduced to practice of my invention as described and claimed in the above-identified Application by preparing a compound of formula (I)



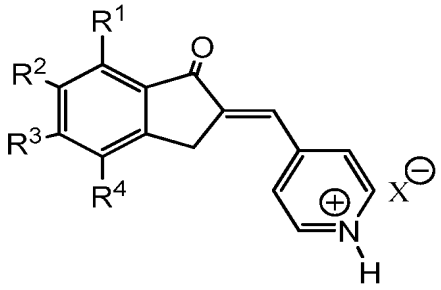
(I)

wherein R^1 and R^4 independently represent H, R^2, and R^3 independently represent H, F, an alkyl having from 1 to 4 carbon atoms, or an alkoxy having from 1 to 4 carbon atoms; R^5 represents a phenyl or a substituted phenyl; and n is 0, in the following process:

a) a reaction of 4-pyridinecarboxaldehyde with a compound of formula (II) in refluxing toluene or benzene to form, in the presence of a stoichiometric amount or a greater than a stoichiometric amount of a strong acid selected from an alkyl sulfonic acid, benzene sulfonic acid, or a substituted benzene sulfonic acid, a compound of the formula (III);

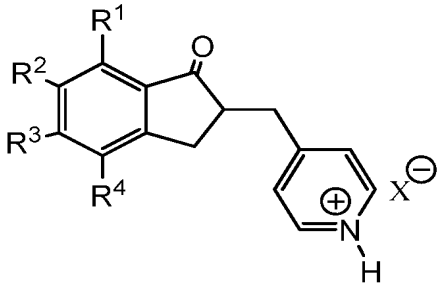


(II)

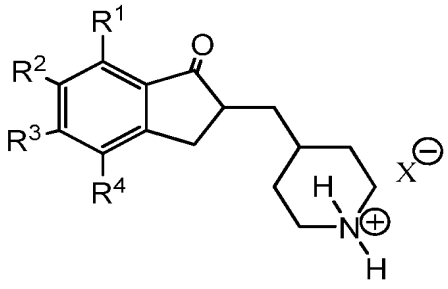


(III)

b) a catalytic hydrogenation of a compound of formula (III) or the compound of formula (V) in a solvent selected from water, an alcohol, an ether, an ester, or an organic acid, at a temperature of between about 0°C and about 150°C, in the presence of a catalyst selected from platinum, palladium, nickel, ruthenium, or salts or oxides thereof, and at a pressure of between about 1 atmosphere and about 100 atmospheres of H_2 to yield a compound of formula (IV); and



(V)



(IV)

c) an N-alkylation reaction of a compound of formula (IV) with a compound of formula Y-$(CH_2)_{n+1}R^5$,wherein Y represents a chlorine atom, a bromine atom, or an iodine atom, R^5 represents a phenyl or a substituted phenyl, and n is 0; in the presence of base at a temperature of from about 0°C to about 150°C to yield a compound of formula (I); wherein X^- is an alkyl sulfonate, benzene sulfonate, or a substituted benzene sulfonate.

3. The reduction to practice is evidenced by the attached Exhibits showing synthesis of donepezil and its derivatives. The Exhibits include a certified copy of the Chinese priority application No. CN 200310106920.3 of the above-identified application and an English language translation thereof.

4. The Exhibits submitted herewith are written records evidencing the completion and actual reduction to practice of a process for the preparation of donepezil and its derivatives.

5. All work was made in China after January 1, 1996.

6. Now produced and shown to me and marked **Exhibit 1**, pages 1-14, to this my declaration are copies of the Chinese priority application No. CN 200310106920.3 showing synthesis of donepezil and its derivatives. In particular, Figure 8 of **Exhibit 1**, page 9, shows the preparation process of donepezil and its derivatives; Examples 1-7 of **Exhibit 1**, pages 12-14 show synthesis of donepezil.

7. Information on the pages shown in **Exhibit 1** was set forth in a written form and filed in the Chinese Patent Office on November 5, 2003, i.e., the filing date of the Chinese priority application No. CN 2003101069203.

8. Because **Exhibit 1** is in Chinese language, attached thereto is **Exhibit 2**, pages 1-19, which is a correct and true English language translation of information contained in **Exhibit 1**.

9. Since the filing date of the Chinese priority application No. CN 2003101069203 is November 5, 2003, which is prior to the filing date of Kumar et al. (WO 04/082685), i.e., prior to March 22, 2004, the completion and actual reduction to practice of the present invention, as described and claimed in the above-identified Application, occurred prior to the filing date of Kumar et al.

10. I further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully Submitted,

Date: December 15, 2011

Hesheng Zhang